

PHOTOLITHOGRAPHY PROCESS WITH MULTIPLE EXPOSURES

ABSTRACT OF THE INVENTION

5

A photolithography process with multiple exposures is provided. A photomask is placed and aligned above a wafer having a photoresist formed thereon at a predetermined distance. Multiple exposures are sequentially performed on the photoresist through the photomask. Each
10 of the multiple exposures is provided with a respective illuminating setting that is optimized for one duty ratio of the photomask. Thereby, an optimum through-pitch performance for pattern transfer from the photomask unto the photoresist is obtained. Then, a development is performed on the photoresist.

15